

## HABITAT RAP

## **OBJECTIVES:**

Students will become acquainted with the concepts of migration, flyway, habitat, and causes of decrease in waterfowl and shorebird populations.

## MATERIALS:

Game Board, Spinner Card, Markers, Instruction and Rap Sheets

## TIME:

About 20 to 45 minutes

## TO PLAY:

Cut rap sheets into cards and place face down on game board. Players start their bird markers in the south and move according to the spinner. The spaces on the board called "Take the Rap" require the oral reading of a Rap Card and movement as indicated on the card. The first player to "migrate" back to California wins.

I fish all day n' sleep all night But somethin' here's a-causin' me a fright. I see more houses n' roads n' malls, Are they gonna leave me any space at all?	Great egret is my name snaggin' fish is my game I love them wetlands, yes I do they're good for me and good for you	
-2	+2	
Did you ever ponder about the times down yonder? And if there's a solution to all of this pollution?	I'm Stanley Wigeon and I ain't no pigeon cuz when things get harsh I just head for the marsh.	
-2	+1	
We're at the refuge where the marshes are huge. We're happy ol' Pintails cuz we're dabblin' for snails.	Grain in your cereal bowl grain in my tummy I love that grain the farmers grow cuz it's so yummy.	
+1	+1	

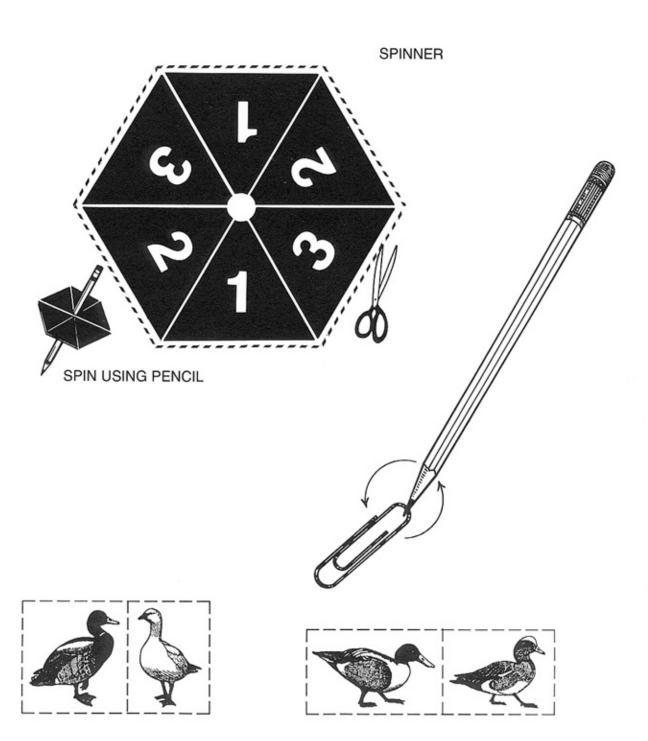
	If there's a wetland left;  I can't be rappin' like I oughta  I can't be rappin' like I oughta  when they take away the watta'.  I'll really be bereft.  -4  -4  -4  The refuge ain't no place to play, and I think that I'd prefer plantin' food for us birds to get, a nice ol' marshy place puttin' in the water so we don't fret.  without the toxic waste.  I gotta find food so I can get fat.  -4  +1  -4  -4  -4  -4  -4  -4  -4  -4  -4  -	When I wing it to Alaska  When I wing it to Alaska  I'm a hawk-like bird.  It don't do me any good  to go inside them halls.  -2  +1  The marsh is where I cruise  to lose the hunger blues.  -2  +1  +1  +3  Haw Hampshire and New York  ain't really my home, they wanna beat the bug If you and noth, the anticipation of the fall migration.  I'm a hawk-like bird.  I when Hampshire and New York  ain't really my home, the Pacific flyway is where I like to roam. I rest in the south and bered in the north, when Mama Nature calls, I just gotta go forth.
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I crave the sanctuaries where I can eat the berries I'll be happy and fat and that's where it's at.	I'm a Mallard mama I need some nesting cover to raise my babies I'm a wetland lover.	Lots of wetlands have been lost to parking lots and car exhaust. It's just an uptight situation that calls for good ol' conservation.
+5	ę	.1
I'm a heron called Great Blue and I'm a-wadin' in the slough tryin' there to sneak some fish into my beak.	Don't give me no back-talk jive I need a bunch of stuff just to keep me alive: water and shelter and space and food, I gotta have it all, man, for me and my brood.	I'm a shy little Sora I dig thick vegetation If I see you, man, I'm gone with no hesitation.
+2	£+	
Bugs 'n stuff are my kind of food My name describes my call I'm a neat sort a' dude This Killdeer's on the ball!	Pardon my caboose I'm a White-fronted Goose I'm a-comin' here today down the Pacific flyway.	When you smell a slough you might think P-U! It ain't a pretty place but it's my very own space.
7	+5	-1
My honking voice is the coolest thing I'm a Canada Goose, and I'm on the wing I graze in the grass, and I swim the lake I'm a big, cool bird, and I ain't no fake.	An American WigeonI'm a knock-out bird You might think my call is a bit absurd I'm pretty fancy, but my wife is not Our friends all flock together, we like 'em a lot.	A wildlife refuge is a heck of a show But too much stompin' through the place makes the birds get up and go.  It's hard to figure out what really is the best: let the people see the birds or let the birds take a rest.

## HABITAT RAP SPINNER

## TO USE:

Put a pencil point through the end loop of a paper clip. Hold pencil firmly in the center of the spinner, and flick the paper clip to make it spin.



Name
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## FIND THE WORDS

EHVLCWATERC

SNYHDOOFERI

ENDUCKSTAMP

F E T A M S L K X I O

ICUINELJSGF

LATHHGEEVRL

DPASRIEURAS

LSEGUFERITP

IBATRJUNEET

WSHABITATDW





WILDLIFE

SPACE

HABITAT

ENDANGERED

FOOD

REFUGE

WATER

MIGRATE

SHELTER

DUCK STAMP



## WATER USAGE

## WATER WORDS

## **OBJECTIVE:**

Students will be able to describe a variety of ways and reasons why water is important to people and wildlife.

## HOW TO GET THERE:

Students brainstorm, make collages, and carry out family discussions on water usage and conservation.

#### MATERIALS:

Large pieces of paper, magazines, scissors, and glue

## GO FOR IT!

- 1. Students discuss all purposes for water.
- Working in teams, students cut out magazine pictures of water, looking especially for pictures that show how all living things need water.
- Still in teams, students construct a large collage of overlapping water pictures on one large piece of paper. Display on bulletin board.
- Final Discussion: Challenge students to think of all the ways they have used water during the day. Stress the importance of water.

## ASSIGNMENT:

Duplicate the chart below on tagboard. Send it home to be posted for a few days and discussed by the family. Have students bring back a *list* from home of the ways they could conserve water if there was a shortage.

## CAN YOU BELIEVE IT?

Taking a bath	30 gallons		
Taking a shower	25-30 gallons		
Filling a sink	1-2 gallons		
Flushing a toilet	4-6 gallons		
Washing clothes	30-50 gallons per load		
Washing dishes	6 gallons per load		

Washing a car 60 gallons

Watering a lawn 100-200 gallons per hour

## WHAT WILL HAPPEN TONIGHT? - A Town Meeting

## **OBJECTIVES:**

Students will gain knowledge of conflicting interests when public policy is being formed. This will be done as the students participate in a public process to decide how land is to be used.

## MATERIALS:

Identification cards for each presenter, and a permit for the City Council to hold

## TIME:

About 20 to 40 minutes for the presentation

## READ TO YOUR CLASS:

Mom and Dad are worried. Whenever there is a town meeting, it causes such a fuss that no one gets anything done for at least three days before and after it happens.

The last open area near the town might be sold - the old marsh. Fifteen acres of it would be sold to Dan the Developer for a shopping center, like the one on the other side of town. It will have department stores.

Everyone around \_\_\_\_\_\_ (your town) remembers growing up with the marsh nearby. It was always good for a great adventure or two, even if Mom didn't appreciate the bugs and frogs you brought home in a jar. You were even successful in raising the tadpole eggs to frogs if you remembered to replace the pond water often enough. You fed the ducks that gathered there in the winter months. Even though you fed them slowly, the seed seemed to disappear long before you were ready to go home. The marsh was a great place.

It sure will be hard to see the old marsh go, but Dad said it would be good for business to have some new stores. Plus, you wouldn't have to ride your bike all the way into town. It would be a lot easier.

I wonder what will happen at the town meeting tonight? People want to know if Dan will get a permit to use the land the way he wants to. This might be the last year for tadpoles.

## THE PLAYERS:

Barbara the Biologist - from the Department of Fish and Wildlife

Dan the Developer - missed his flight and is late to the meeting

Mr. Bird - represents the Bird Watchers' Society

Mr. History - from the Historical Society

Pam the Planner - from the town planning office

Ms. Politician - running for mayor

Sam the Sportsman - represents those who hunt and fish in the marsh

Brenda the Businesswoman - represents the local business community

City Council - will decide the best use for the land, and give the permit to Dan if the members (3) agree with the plan

Citizens - both happy and upset; all are interested and full of questions

Timekeeper - to keep everyone short-winded - 2 minutes each for the presenters

## PRESENTATION:

Each presenter will have 2 minutes to deliver a short speech. Emphasis is on the power of a few well-delivered sentences.

## QUESTIONS FROM THE AUDIENCE:

As long as order prevails

## DECISION TIME!

After the presentations and any comments from the audience, the City Council adjourns to take a short break and make its decision. The decision is announced.

class from	(school). I want you to think about certain things
1. What addition	nal information would have helped you plan your speech?
<ol><li>Where would</li></ol>	you go to get this information?
3. Who were the	e leaders during the City Council Meeting?
4. Were you ass	igned to speak for a group you don't agree with?
	at other people have different needs and ideas, and this ay to identify them.)
Simulation games like t	this one do three things:
<ol> <li>Clearly explain</li> </ol>	in a problem - The problem we discussed was
2. Show us that	things can influence a decision. What things?
	there are people interested in the decision. Groups

interested in our decision would be:

# Barbara the Biologist

Remember Barbara, you stand for the fish and wildlife of the area. You represent the creatures who cannot speak for themselves.

Could the marsh area be left alone as habitat for the birds?

The ducks use the marsh ponds in the winter and spring when it is too cold to stay up north in Alaska, Canada, Washington and Oregon.

Curlews, killdeer, stilts and avocets love to hunt for food in the mud, and the geese love the grassy areas.

Remind people that the marsh is home for many other kinds of fish and wildlife too.

Long live the wildlife!

# Dan the Developer

Remember Dan, you stand for all the investors from San Francisco.

They will put a lot of money into this project. They expect you to convince the people of the town, especially the City Council, that the shopping center will bring jobs for the town and better and easier shopping for the people.

The town has really grown. It needs a shopping center on the north side of the town.

You and your investors will all make a good profit if the shopping center is built.

Go for it!

## Mr. Bird

Remember Mr. Bird, your wonderful birds are in danger. As this year's president of the Bird Watchers' Society, it is up to you to save them!

If Dan the Developer puts in that shopping center, not one bird will return to the area. All that habitat will be lost forever.

Not only are there very few areas left for the birds, there are very few places left for people to watch birds and enjoy nature and the outdoors.

Hang in there for your birdwatcher friends and your feathered friends!

# Mr. History

Remember Mr. History, that you stand for all the old places that are left in this town, and, there aren't many left.

The first family to settle in the area built their barn on the edge of that marsh, and it is still standing today.

That barn is over 100 years old and should be preserved in some way, not torn down.

And of all the bad luck, it is on the piece of land that may be sold to Dan the Developer. There is no way he is going to let the barn stand.

You've got to convince the City Council members to grant the permit ONLY if the barn can be saved.

Mr. History, fight for the past!

## Pam the Planner

Remember Pam, you are to look at all of the town's needs, because your job is to help find the best solution for all of the town's citizens.

The town really needs the new jobs the shopping center will bring.

However, you also have to think about all of the new roads a shopping center will require. How will the town pay for them?

The town needs to clean up the river which flows by the marsh and on into town. The marsh could be a natural water filter to remove silt and absorb pollutants. Does the marsh provide other benefits people are forgetting?

Is there a way to build the shopping center so that all of the marsh won't be lost?

Pam, the City Council members want to know what you think, so think hard.

Now is the time to show this town what a leader you can be!

So, just think of a plan that will make Dan and the nature lovers happy.

How can you stand for both the shopping center, which will put more people to work, and the people like Mr. Bird, who has all of his bird-watcher friends ready to vote for your opponent.

Remember Ms. Politician, that you want to represent the town as mayor next year, so you had better start lining up the votes now!

Ms. Politician

# Sam the Sportsman

Remember Sam, you represent all of the people of the town who like to fish and hunt in the marsh.

Men and women interested in outdoor sports such as hunting and fishing want to protect natural areas where fish and wildlife live.

There are fewer and fewer places to go and enjoy these activities with your children or friends.

You want to save those places that are left.

You support Dan the Developer and want the shopping center built.
The shopping center would bring jobs and money into the town, and you think that would be good for everyone.
You represent local businessmen and women and you want the town to grow and prosper.

Brenda the Businesswoman

# City Council Member

Remember City Council member, that you were elected by the people of the town to represent them - all of them.

You must listen carefully to all the speakers and people from the audience before you decide whether to grant the permit to Dan.

You might grant the permit only it some changes are made in the plans. What would those changes be? If you give him the permit so the sale can go through, you had better be ready with good reasons why.

The town is waiting for your answer.

# Timekeeper

Remember Timekeeper, the folks at the town meeting are going to be excited.

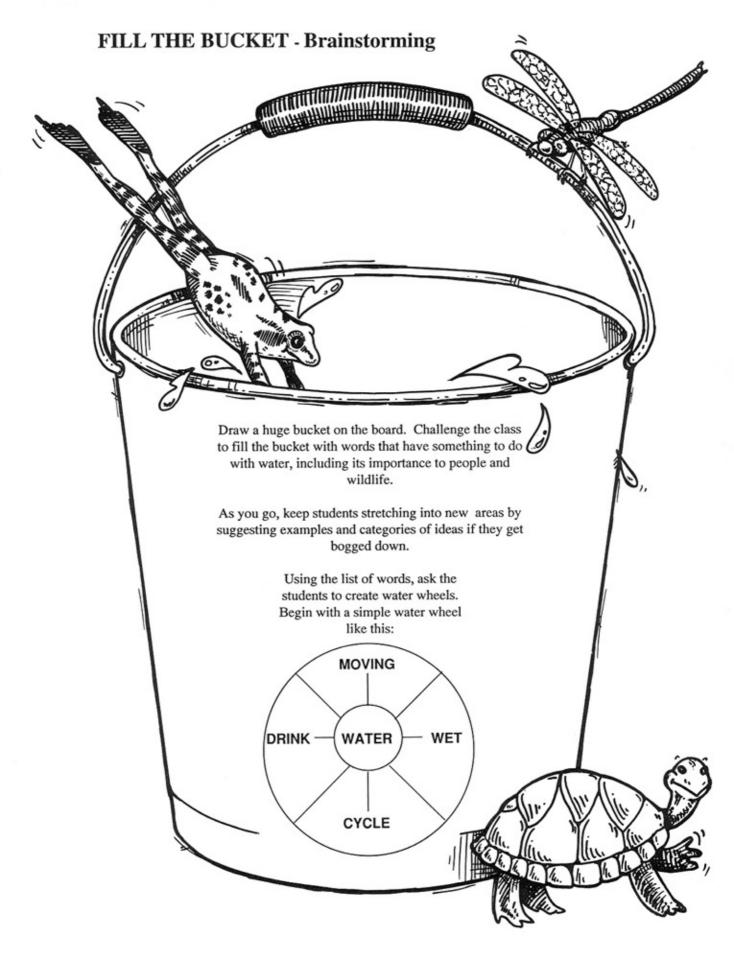
It is your job to see that each of the eight speakers does not go over the time limit of 2 minutes each.

Questions from the audience should be short - about 20 seconds each.

The City Council members are counting on you to help keep order tonight.

Good luck!!

Permit



## WETLANDS BINGO

## You start it - the class continues

## OBJECTIVE:

Students will see, hear, write, say, and spell wetlands vocabulary.

## MATERIALS:

Pencils and paper

## GO FOR IT!

1. Put these wetlands words on the board or the overhead projector:

marsh	wildlife	wildlife habitat	
water	shelter	space	soil
fish	swim	dive	fly

Also use the words from the VOCABULARY LIST on page two of this activity, and add other words as the class thinks of more.

- 2. Students write any five words on their papers. Give about two minutes for quiet study.
- Slowly, call out the words (but not in order), and mark them off as you go. When a word on a student's paper is called, the student marks off the word.
- 4. After a student has marked off all five words, he/she jumps up and shouts "BINGO!" The words on the paper must be checked and spelled correctly out loud. Then the student is up and the game begins again.

As the teacher, you are the first one up. Then sit back and relax!

## VOCABULARY LIST

4-6

HABITAT - A balance of food, water, cover, and space which satisfies animals' needs for life

WETLAND - A place where the soil is always moist or covered with water

MARSH - A type of wetland where water lilies and cattails grow

ESTUARY - A place where fresh water and salt water come together

UPLANDS - Slightly elevated dry lands

WILDLIFE - Large or small animals that are not domesticated

WILDLIFE REFUGE - An area set aside by the government to be managed on behalf of the wildlife living there. Management includes planning, repairing, and improving the animal habitats, and teaching people about wildlife.

MIGRATION - Movement of birds between their breeding and wintering grounds

FLYWAY - A path birds travel when migrating between their breeding and wintering grounds

ORGANISM - A living creature

SPECIES - A group of animals that are mostly alike and can produce offspring

ENDANGERED - A certain species in danger of disappearing from the earth

**DEVELOPMENT** - Land that has been changed by man through farming, dredging, or the construction of roads and buildings. Land that is being used in a new way

RESOURCE - Part of our natural surroundings that we value and use

CONSERVATION - A careful protection of our natural resources so that they can be available in the future

POLLUTION - Occurs when people put unhealthy materials into the environment

ECOLOGY - The study of how organisms live and act in their environment

## WORD BUILDER

NT.				
Name				

How many words can you make from .....

## HABITAT IS FOR THE BIRDS!

- 1. 6.
- 2. 7.
- 3. 8.
- 4. 9.
- 5. 10.

## Think of more!

- 11. 16.
- 12. 17.
- 13. 18.
- 14. 19.
- 15. 20.



## CROSSWORD PUZZLE

...See clues \*\*

#### ACROSS

- 1. This state provides one of the great wintering areas for birds along the Pacific Flyway. 2. To give assistance 3. This area has suffered a 95% loss of wetlands over the last 100 years. This is more than any other major ecological unit has lost in the entire North American continent. 4. The object of our efforts 5. An area set aside for the preservation of wildlife and its habitat 6. A wetland that is dominated by \*\*shrubs or trees-(Head for the dictionary. This is tough.) , water, cover, and space are needed for waterfowl habitat. 8. Waterfowl need food, water, \_\_\_\_\_\_\_, and space for their habitat.9. We have to \_\_\_\_\_\_ about our wildlife resources. 10. The American \_\_\_\_\_\_is seen in great numbers as it winters all through California. 11. Restrictions on hunters are only one \_\_\_\_\_\_ that is used in the efforts to preserve and increase the duck population. 12. The Aleutian Canada \_\_\_\_\_migrated eastward 1,000 miles before setting course for California. 13. A compound word describing the swans, geese, and ducks of the Central Valley 14. The Aleutian Canada Goose and the tule white-fronted goose are now considered to be \_\_\_\_\_ species because of their decrease in numbers. 15. The American \_\_\_\_\_\_ is a loud, aggressive bird with an upcurved bill. (\*\*Check the flashcards. Then double check your answer for number 10 ACROSS.) DOWN 1. What action can you perform with water? 2. The place where a species is usually found 3. Many wetlands are lost to this kind of development. 4. Government agencies working with private groups and citizens to save the remaining bird habitat in the Central Valley 5. A route from California to Alaska that is used by migrating birds 6. Migration takes place during two of these. 7. Soft-stemmed plants and grasses and rushes grow here - also cattails, water lilies, and duckweed. (\*\*Check out number 6 ACROSS before you decide.) 8. Birds that like the water but are not considered "waterfowl" live on the \_\_\_\_\_\_.
- Possessive form of "they".

(\*\*Look at number 10 ACROSS.)

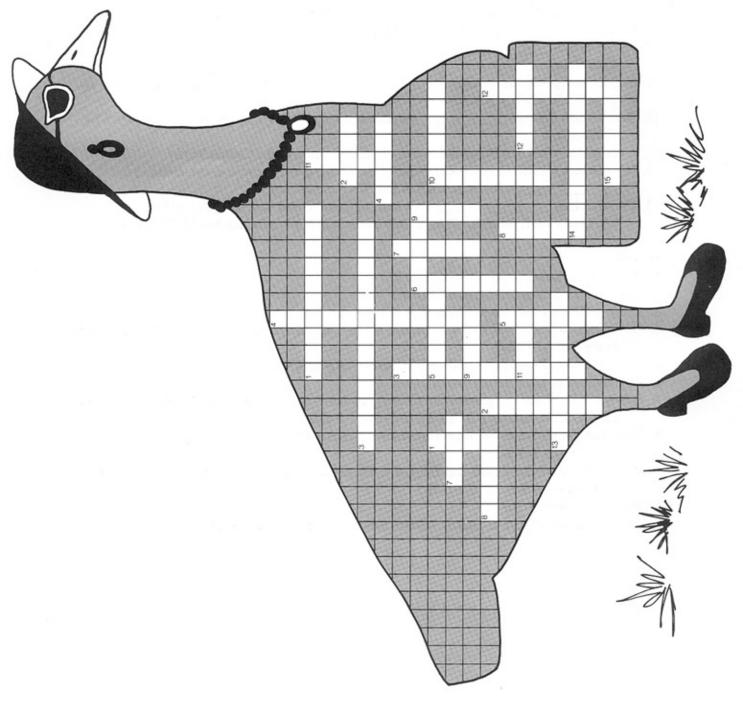
9. An animal taken as food

12. The right to use a piece of land as wildlife habitat without owning the land

10. An area that periodically has waterlogged solids or is covered with a shallow layer of water.

# WORD BANK

CENTRAL VALLEY JOINT VENTURE AGRICULTURE POUR WATERFOWL ENDANGERED COVER CALIFORNIA FLYWAY SWAMP PREY EASEMENT WETLAND HABITAT SEASONS AVOCET SHORE REFUGE MARSH BIRDS THEIR GOOSE HELP TOOL



WOOD DUCK STILT SNOW GOOSE COMMON FLICKER SANDHILL CRANE WARBLER NORTHERN PINTAIL GREAT BLUE HERON HARRIER HAWK KINGFISHER AMERICAN BITTERN AMERICAN WIGEON WESTERN MEADOWLARK

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SRE

WHK

OWHI

OHAR

CURLEW MALLARD AVOCET GREAT EGRET RING-NECKED PHEASANT PIED-BILLED GREBE KILLDEER CANADA GOOSE WHITE-FRONTED GOOSE CALIFORNIA QUAIL RUDDY DUCK

RED-WINGED BLACKBIRD

AME

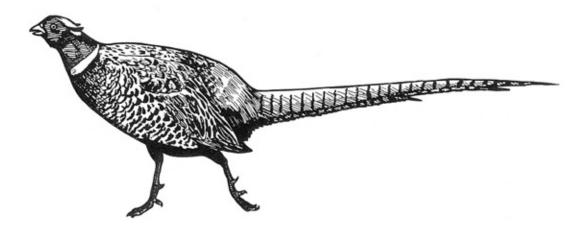


## BREAK A LEG!

Can you find the hidden Central Valley birds? Good Luck!\*

\*GEESE is hidden in #1

- 1. GEE, SEAN, YOU'RE JUST NOT RIGHT FOR THE ROLE.
- NOW, DON'T GIVE ME ANY LIP. HE, AS ANTELOPE AL, WILL BE PERFECT FOR THE PART.
- 3. AH, AWKWARD LINES ARE HARD TO MEMORIZE.
- 4. ACCORDING TO THE SCRIPT, THE CROWD, IN PANIC, RAN EVERYWHERE.
- 5. THE SPOTLIGHT PICKED UP THE INJURED FATHER ON THE STAIRS.
- 6. "OGRE, BEGONE!" THE ACTRESS CRIED OUT.
- 7. DON'T START THE FINAL REHEARSALS 'TIL THE DIRECTOR GETS HERE.
- 8. THE STAR SENT REGRETS THAT HE COULDN'T ATTEND THE OPENING.
- 9. THE LIGHTS FLICKERED, THE CROWD BECAME QUIET, AND THE PLAY BEGAN.
- 10. NOW, THE PLAYERS WANT A BIG PARTY TO CELEBRATE THE GREAT REVIEWS!



(Cut this part off if you want to give them a real challenge.)

## WORD BANK:

CROW	GEESE	PHEASANT
HAWK	CRANE	HERON
GREBE	STILT	EGRET
FLICKER	SWAN	

# CURRENT BOOK SELECTIONS 4-6

## FOR INFORMATION:

Birds of Prey, Nature Watch Series, 1988 Bird's Nest, Barrie Watts, 1987 Swans, Jack D. Scott, 1987 The Call of The Trumpeter Swan, Jay Featherly, 1986 Adaptable Birds, John Andrews, 1985 Birds, David Cook, 1985

## FOR FUN:

Simon the Swan, Cicely M. Berker, 1989 Sea Swan, Kathryn Lasky, 1988 Oliver and the Lucky Duck, Page McBrier, 1986 The Pheasant, Kimio Endo, 1986

## Also see older books:

Commander the Gander, David McKelvey, 1984
The House of Wings, Betsy C. Byars, 1982
Compass Merit Badge Book, Boy Scouts of America, 1981
A Field Guide to the Birds, Roger Tory Peterson, 1980
Birds and How They Function, Phillip S. Callahan, 1979
Habitat Guide to Birding, Thomas P. McElroy, 1974
The California Wildlife, Vinson Brown & George Lawrence, 1965